

SY-6IZA Motherboard

Socket 370 for Intel Celeron™ Processor Intel 440 ZX AGP/PCI Motherboard 66&100MHz Front Side Bus supported ATX Form Factor

User's Guide &

Technical Reference

About This Guide

This User's Guide is for assisting system manufacturers and end users in setting up and installing the Motherboard. Information in this guide has been carefully checked for reliability; however, no guarantee is given as to the correctness of the contents. The information in this document is subject to change without notice.

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6IZA SERIAL

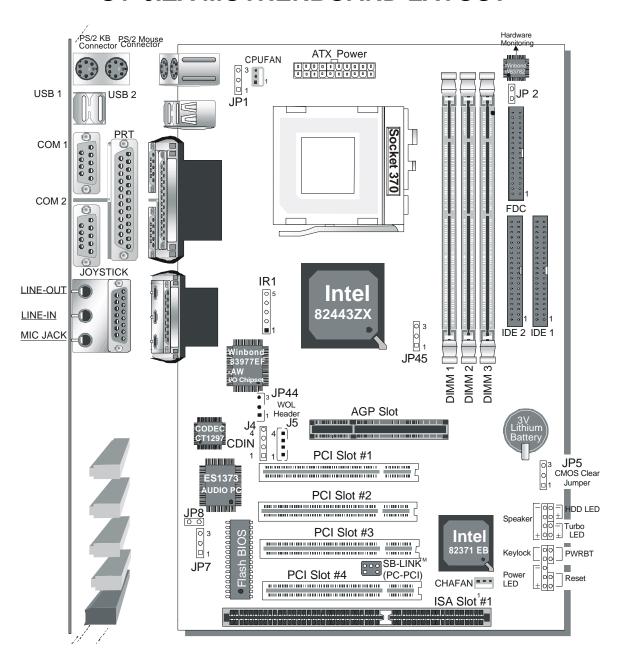
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SY-6IZA MOTHERBOARD LAYOUT



Back Panel

SY-6IZA Platform

Introduction SY-6IZA

Chapter 1

INTRODUCTION

The **SY-6IZA** AGP/PCI Motherboard is a high-performance Celeron[®] processor supported ATX form-factor system board. **SY-6IZA** uses the 440 ZX Chipset technology and supports Socket 370 Celeron[™] class processors. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

1-1 KEY FEATURES

Supports Intel Socket 370 Celeron[™] processor (300A~433 MHz)

Auto-detect CPU voltage

PC98, ACPI, Ultra DMA/33

Supports system memory up to 256 MBytes

Power-on by modem or alarm

Supports power-on by keyboard

Supports onboard hardware monitoring

and includes Hardware Doctor ™utility

Supports Creative SB-LINK ™(PC-PCI) for PCI audio

1 x 32-bit AGP slot

3 x 32-bit bus mastering PCI slots

1 x 32-bit bus slaving PCI slot

2 x USB ports onboard

1 x IrDA port

Supports multiple-boot function

SOYO COMBO Setup

Supports power failure resume

Supports Fan speed control

Supports Hardware suspend (APM mode only)

Introduction SY-6IZA

SY-6IZA PLATFORM FEATURES

Board Size 4-layer PCB, 17x30.5cm(6.7"x12"), ATX Form

Factor

Socket 370 66/100MHz FSB

Celeron™ Processor 300A/333/366/400*/433* MHz

Built-in full speed 128KB L2 cache.

Features Auto-detection of CPU voltage

Chipset 440 ZX AGP Set

ATX Power 20-pin Male Connector

CPUFAN 3-pin CPU Cooling Fan Connector

Memory DIMM Bank (DIMM1~3)

Three strips of 168-pin Unbuffered SDRAM DIMM

Supports 8/16/32/64/128MB DIMM modules in each

bank

Supports up to 256 MBytes of main memory

BIOS System BIOS built-in, Award BIOS

> APM, ACPI and "Plug-and-Play" function

Supports multiple-boot function

Onboard FLASH memory for easy upgrade

Y2000 Compliant

Bus Controller Compliant with PCI specifications version 2.1

PCI Slots 3 x 32-bit Bus Mastering Slots and 1 x 32-bit Bus

Slaving Slot

AGP Slot 1 x 32-bit AGP Slot

ISA Slots 1 x 16-bit ISA Slots

IDE1, IDE2 2 x 40-pin Bus Mastering E-IDE/ATAPI Ports

➤ IDE1: Primary IDE Device Connector

> IDE2: Secondary IDE Device Connector

Supports Ultra DMA/33MHz

FDC 1 Floppy Disk Drive (FDD) Port

(Supports 1.2MB/1.44MB/2.88MB and LS120/3-mode FDD)

IR1 5-pin Serial Infrared Device Header

Keylock 5-pin KeyLock Header

Reset 2-pin Reset Switch Header

Introduction SY-6IZA

Speaker	4-pin PC Speaker Header
TB_LED	2-pin Turbo LED Header
HDD_LED	2-pin IDE Device LED Header
PWRBT	ATX Power On/Off Switch 2-pin Header
J4, J5	2 x CD Line-in 4-pin Headers
JP1	Power-On by Keyboard Jumper
JP2	External Suspend Button Header
JP5	CMOS Clear Jumper
JP7	Onboard Sound Jumper
JP8	Power Button Enable Jumper
JP44	WOL (Wake-On-LAN) 3-pin Header
JP45	AGP operating speed Select Jumper

SY-6IZA BACK-PANEL FEATURES

ECP/EPP/SPP multi-mode parallel printer port

COM1, COM2 2 x Onboard RS-232 Serial Ports

Feature 2 x high-speed UARTs (with 16550 FIFO)

PS/2 KB 1 x Onboard PS/2 Keyboard Port

PS/2 Mouse 1 x Onboard PS/2 Mouse Port

USB1, USB2 2 x Onboard USB (Universal Serial Bus) Ports

JOYSTICK 1 x Onboard 15-pin Joystick Port

LINE-OUT 1 x Onboard Line-out Audio Stereo Jack
LINE-IN 1 x Onboard Line-in Audio Stereo Jack
MIC JACK 1 x Onboard Microphone Stereo Jack

^{*}These processors are not available yet for testing.

Introduction SY-6IZA

HANDLING THE MOTHERBOARD

To avoid damage to your Motherboard, follow these simple rules while unpacking:

- Before handling the Motherboard, ground yourself by grasping an unpainted portion of the system's metal chassis.
- Remove the Motherboard from its anti-static packaging. Hold the Motherboard by the edges and avoid touching its components.
- Check the Motherboard for damage. If any chip appears loose, press carefully to seat it firmly in its socket.



Warning: Do not apply power if the Motherboard appears damaged. If there is damage to the board, contact your dealer immediately.

1-2 ELECTROSTATIC DISCHARGE PRECAUTIONS

Make sure to ground yourself before handling the Motherboard or other system components. Electrostatic discharge can easily damage the components. Note that you must take special precautions when handling the Motherboard in dry or air-conditioned environment.

To protect your equipment from electrostatic discharge, take the following precautions:

- Do not remove the anti-static packaging until you are ready to install.
- Ground yourself before removing any system component from its protective anti-static packaging. (To ground yourself, grasp the expansion slot covers or other unpainted portions of the computer chassis.)
- Frequently ground yourself while working or use a grounding strap.
- Handle the Motherboard by its edges and avoid touching its components.

Chapter 2

HARDWARE SETUP

Congratulations on your purchase of **SY-6IZA** Motherboard. You are about to install and connect your new Motherboard.



Note: Do not unpack the Motherboard from its protective anti-static packaging until you have made the following preparations.

2-1 PREPARATIONS

Gather and prepare all the following hardware equipment to complete the installation successfully:

Celeron[™] processor with built-in CPU cooling fan (boxed type).



Note: This Motherboard supports non-boxed type CPUs. The heavier CPU cooling fan requires the installation of a CPU support stand included in this Motherboard package.

- 2. DIMM memory module
- 3. Computer case and chassis with adequate power supply unit
- 4. Monitor
- 5. PS/2 Keyboard
- 6. Pointing Device (PS/2 mouse)
- 7. Speaker(s) (optional)
- 8. Disk Drives: HDD, CD-ROM, Floppy drive ...
- 9. External Peripherals: Printer, Plotter, and Modem (optional)
- 10. Internal Peripherals: Modem and LAN cards (optional)

Frequently Asked Questions:

Do I need to install a sound card?

The answer is NO since, for your convenience, the SY-6IZA Motherboard already features three built-in audio-stereo ports (Line-in, Line-out, and Microphone).

• What kind of speaker can connect to "Line-out" port? This motherboard requires a speaker with built-in amplifier to generate proper output sound volume.

2-2 UNPACKING THE MOTHERBOARD

When unpacking the Motherboard, check for the following items:

- The SY-6IZA 440 ZX AGP/PCI Motherboard
- This Quick Start Guide *
- The Installation CD-ROM *
- One IDE Device Flat Cable
- One Floppy Disk Drive Flat Cable

^{*} If your board comes with a driver disc and a paper manual, the Quick Start Guide and the CD-ROM are not included in the package.



Warning: Do not unpack the Motherboard from its antistatic packaging until you are ready to install it.

Like most electronic equipment, your Motherboard may be damaged by electrostatic discharge. To avoid permanent damage to components ground yourself while working by using a grounding strap. Otherwise, ground yourself frequently by touching the unpainted portion of the computer chassis to drain the static charges.

Handle the Motherboard carefully, holding it by the edges. You are now ready to start the installation.

2-3 INSTALLATION GUIDE

We will now begin the installation of the Motherboard. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.



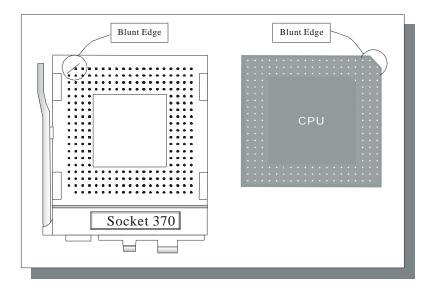
Warning: Turn off the power to the Motherboard, system chassis, and peripheral devices before performing any work on the Motherboard or system.

Step 1. CPU Installation

Follow these instructions to install your Celeron $^{\text{TM}}$ class processor correctly.

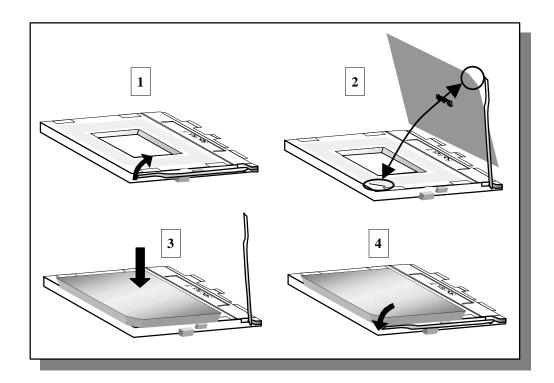
Locate the CPU socket labeled Socket 370 on your Motherboard and note the distinctive pinhole arrangement.

Note the corresponding pinhole arrangement on the processor.



Follow these steps to install the CPU in the Socket 370:

- 1. Lift the socket handle up to a vertical position.
- 2. Align the blunt edge of the CPU with the matching pinhole distinctive edge on the socket.
- 3. Seat the processor in the socket completely and without forcing.
- 4. Then close the socket handle to secure the CPU in place.



Step 2. CPU Fan Installation

Your Celeron[™] processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.



Note: Remember to connect the fan to the appropriate power source.

Step 3. SDRAM Memory Module Installation

This Motherboard features 3 x DIMM for 168-pin 3.3V unbuffered DIMM modules, providing support for up to 256MB of main memory using DIMM modules from 8MB to 128MB.

Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
1	Double-sided /Single-sided	Double-sided	
2	Double-sided /Single-sided		Double-sided
3	Double-sided /Single-sided	Single-sided	Single-sided
RAM Type	SDRAM		
Memory Module Size (MB)	8/16/32/64/128 Mbytes		
Note: Because DIMM 2 and 3 are shared, double-sided DIMMs can be used in only one of the DIMMs. With single-sided DIMMs both 2 and 3 can be used.			

Step 4. IDE Device Installation (HDD, CD-ROM)

This Motherboard offers two primary and secondary IDE device connectors (IDE1, IDE2). It can support up to four high-speed HDD or CD-ROM.

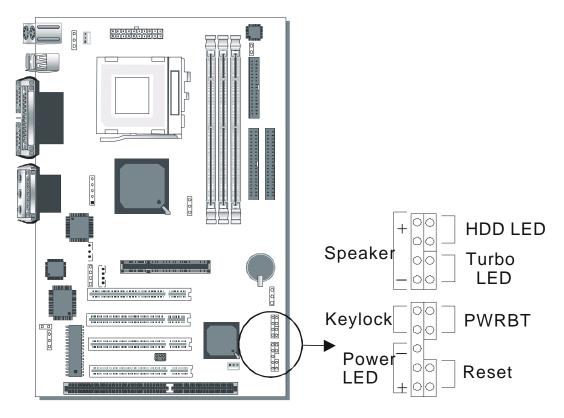
Connect one side of the 40-pin flat cable to the IDE device (HDD or CD-ROM) and plug the other end to the primary (IDE1) or secondary (IDE2) directionally keyed IDE connector on the Motherboard. This Motherboard can support up to four HDDs.

Step 5. Floppy Drive Installation

The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB, and LS-120. In addition, this Motherboard supports a 3-mode (720KB/1.25MB/1.44MB) floppy commonly used in Japan.

Connect one side of the 34-pin flat cable to the floppy drive and plug the other end to the floppy drive connector on the Motherboard. This Motherboard can support up to 2 floppy drives.





Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

1. Power LED & KeyLock

Plug the Power LED cable into the 5-pin Keylock header. Some systems may feature a KeyLock function with a front panel switch for enabling or disabling the keyboard. Connect the KeyLock switch to the 5-pin Keylock header on the Motherboard.

Please install according to the following pin assignment: pin 1,3 are for Power LED and pin 4,5 are for Keylock.

2. Reset

Plug the Reset push-button cable into the 2-pin Reset header on the Motherboard. Pushing the Reset button on the front panel will cause the system to restart the boot-up sequence.

3. Speaker

Attach the 4-pin PC speaker cable from the case to the Speaker header on the Motherboard.

4. Turbo LED

Connecting the 2-pin Turbo LED cable to the corresponding Turbo LED header will cause the LED to light whenever the system is in Turbo mode.

The manufacturer has permanently set this Motherboard in Turbo mode due to most hardware and software compliance to turbo mode.

5. IDE LED

Attach the 2-pin IDE device LED cable to the corresponding IDE LED header on the Motherboard. This will cause the LED to lighten when an IDE (HDD, CD-ROM) device is active.

6. ATX Power On/Off Switch

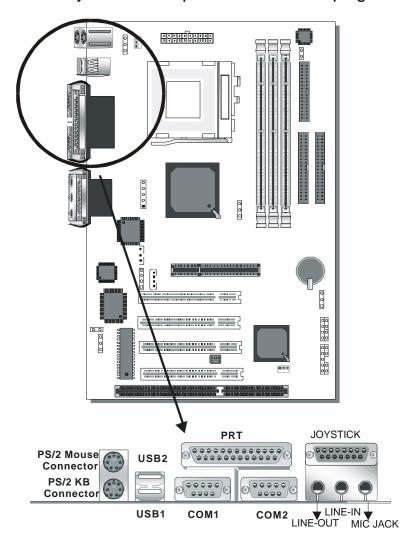
Attach the 2-pin momentary type switch to the PWRBT header for turning On or Off your ATX power supply.

Step 7. Back Panel Connections

All external devices such as the PS/2 keyboard, PS/2 mouse, printer, modem, USB, joystick and audio devices (speakers/headphones, microphone and CD/cassette player) can be plugged directly onto the Motherboard back panel.

Only after you have fixed and locked the Motherboard to the computer case can you start connecting the external peripheral devices.

When connecting an external device, use the following figure to locate and identify which back panel connector to plug the device to.



1. Onboard Serial Ports COM1/COM2

External peripherals that use serial transmission scheme include:

- serial mouse,
- and modem.

Plug the serial device cables directly into the COM1/COM2 9-pin male connectors located at the rear panel of the Motherboard.

2. Parallel Port PRT

This parallel port is used to connect the printer or other parallel devices.

Plug the parallel device cable into the 25-pin female connector located at the rear panel of the Motherboard.

3. PS/2 Keyboard

Plug the keyboard jack directly into the 6-pin female PS/2 keyboard connector located at the rear panel of the Motherboard.

4. PS/2 Mouse

Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.

5. Universal Serial Bus USB1/USB2

This Motherboard provides two USB ports for your additional devices. Plug the USB device jack into the available USB connector USB1 or USB2.

- USB devices under Win98 are allowed.
- With Win95, use the flow UHCI specifications.

6. Onboard Joystick port/audio

This Motherboard provides Joystick port and audio.

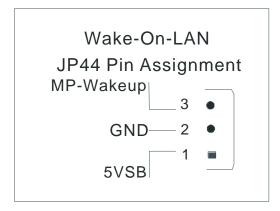
- Attach the joystick cable to the 15-pin JOYSTICK port at the rear panel of you motherboard.
- This Motherboard features three built-in audio-stereo ports (labeled line-out, line-in, and mic jack) convenient to directly plug-in all your external audio devices.

Step 8. Other Connections

1. Wake-On-LAN (WOL)

Attach the 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function to the JP44 header on the Motherboard. This WOL function lets users wake up the connected computer through the LAN card.

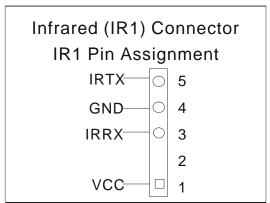
Please install according to the following pin assignment:



2. Infrared (IR)

Plug the 5-pin infrared device cable to the IR header. This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

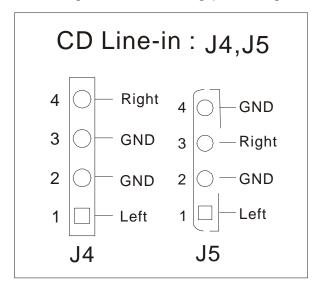
Please install according to the following pin assignment:



3. CD Line-in (J4,J5)

This Motherboard provides two CD-Line in connectors. Please connect the 4-pin audio cable from your CD-ROM drive to either CDIN1 or CDIN2. (It fits in only one, depending on the cable that came with your CD-ROM drive)

Please install according to the following pin assignment:



4. Other Display Cards

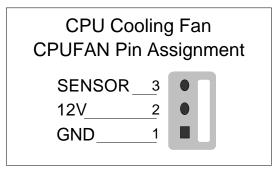
Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

Step 9. Cooling Fan Installation

1. CPU Cooling Fan

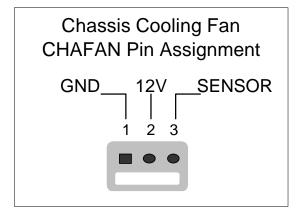
After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard. The fan will stop when the system enters into Suspend Mode. (Suspend mode can be enabled from the BIOS Setup Utility, [POWER MANAGEMENT] menu.)

To avoid damage to the system, install according to the following pin assignment:



2. Chassis Cooling Fan

Some chassis also feature a cooling fan. This Motherboard features a CHAFAN connector to provide 12V power to the chassis fan. Connect the cable from the chassis fan to the CHAFAN 3-pin connector. Install according to the following pin assignment:





Note: CPUFAN must be installed for this Motherboard, CHAFAN is optional.

Step 10. AGP VGA Card

Insert the AGP VGA card into the AGP slot. Then connect the monitor information cable to the AGP card back plane external connector.

Follow the manufacturer's instructions to perform the AGP VGA drivers installation.

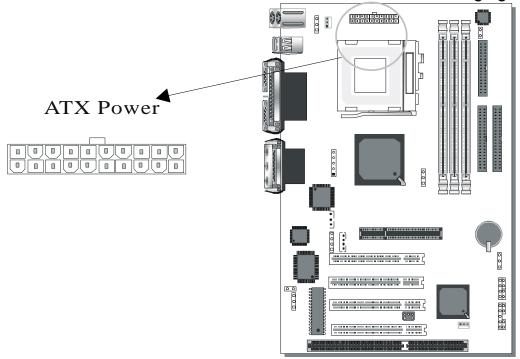
Other Display Cards: Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

Step 11. PCI Audio Card

Some PCI soundcards require a PC-PCI DMA channel. Attach the 5-pin cable from your PCI audio card to the SB-LINK ™header on the Motherboard. The SB-LINK ™will forward requests for legacy DMA channel to the PCI Bus.

Step 12. ATX Power Supply

Plug the connector from the power directly into the 20-pin male ATX PW connector on the Motherboard, as shown in the following figure.



Warning: Follow these precautions to preserve your Motherboard from any remnant currents when connecting to ATX power supply:

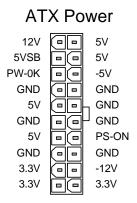


Turn off the power supply and unplug the power cord of the ATX power supply before connecting to ATX PW connector.

The Motherboard requires a power supply with at least 200 Watts and a "power good" signal. Make sure the ATX power supply can take at least 720 mA * load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

* **Note:** If you use the Wake-On-LAN (WOL) function, make sure the ATX power supply can support at least 720 mA on the 5V Standby lead (5VSB).

Please install the ATX power according to the following pin assignment:



Pay special care to the directionality.

Step 13. Power-On by Keyboard Jumper (JP1)

You can choose to enable the Power-On by Keyboard function by shorting pin 2-3 on jumper JP1, otherwise, short pin 1-2 to disable this function.

Power-On by Keyboard	Disable	Enable
JP1 Setting	Short pin 1-2 to disable the Power-On by Keyboard function.	Short pin 2-3 to enable the Power-On by Keyboard function.



Note: When using the Power-On by Keyboard function, please make sure the ATX power supply can take at least 720mA load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

Step 14. External Suspend Button (JP2)

Some cases come with a suspend button, insert the plug into JP2. In addition to through this button, the system can also enter the suspend mode through your OS.



Note: Suspend mode only functions if your Power Management mode is APM. Make sure that the BIOS setting for Power Management is APM. Windows 98 can be installed with ACPI Power Management (default is APM), in this case suspend mode will not function either.

Step 15. CMOS Clearing (JP5)

After you have turned off your computer, clear the CMOS memory by momentarily shorting pins 2-3 on jumper JP5, for a few seconds. Then restore JP5 to the initial 1-2 jumper setting in order to recover and retain the default settings.

After you have turned off your computer, clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5 for at least 5 seconds. Then permanently short pin 1-2 to retain new settings.

Jumper JP5 can be easily identified by its white colored cap.

Short pin 2-3 for o 2 Short pin at least 5 seconds to clear the CMOS o 1 Short pin to retain resettings	

Note: You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.

Step 16. Onboard Sound Jumper (JP7)

The onboard audio features of your Motherboard are controlled by jumper JP7. You can choose to enable or disable the available sound function by setting JP7 accordingly.

- Short pin 1-2 on jumper JP7 to enable the onboard sound function.
 Then, you can plug your external audio devices such as amplified-speakers, CD-player, and microphone to the Motherboard Line-out, Line-in and Mic ports right after the Motherboard is installed. (You do not need to install any sound card.)
- To disable the onboard sound options short pin 2-3 on jumper JP7.

Onboard Sound	Disable	Enable
JP7 Setting	Short pin 2-3 to disable the onboard sound function.	Short pin 1-2 to enable the onboard sound function.

Note: The Soundchip can be disabled in two ways, through the BIOS or by setting JP7. If JP7 is set to 1-2, the soundchip is enabled. Setting JP7 to 2-3 will disable the soundchip.

Step 17. Power Button Enable (JP8)

Your system can be power on by either pressing a power button or typing in a password, which can be set in the BIOS SOYO COMBO Setup. To avoid being unable to power up the system due to of forgetting the password, you can place a jumper cap to short JP8. This will always enable the Power Button.

Power Button Enable	Power Button always enabled	Power Button according to BIOS setting
JP8 Setting	always enable the Power	Open pin for a Power Button function according to the BIOS setting.

Step 18. Power up FSB clock and AGP bus clock Setting (JP45)

JP45 is used to adjust AGP bus clock frequency depending on the value of the front side bus (FSB) clock, also the setting of the JP45 determines the power up FSB clock which will remain effective until the BIOS set the FSB clock to the CMOS setting.

JP45 Setting	9 3 9 2 0 1	O 3 Q 2 O 1
Power up FSB Clock	66MHz	100MHz
AGP Clock	AGP Clock =	AGP Clock =
, (S. 6166)(FSB Clock ÷ 1	FSB Clock ÷ 1.5

Note: The specification of maximum AGP bus Clock frequency is 66.6MHz.

- * Set JP45 to pin 1-2 short when you use a FSB 100MHz CPU.
- * Set JP45 to pin 2-3 short when you use a FSB 66MHz CPU such as 300AMHz, 333MHz, 366MHz, etc.
- * Set JP45 to pin 1-2 short when you use a FSB 66MHz but want to over clock the FSB clock to 100MHz Via ApolloPro the BIOS setting.

Step 19. Power On

You have now completed the hardware installation of your Motherboard successfully.

- 1. Turn the power on
- 2. To enter the BIOS Setup Utility, press the key while the system is performing the diagnostic checks,



Note: If you have failed to enter the BIOS, wait until the boot up sequence is completed. Then push the RESET button and press key again at the beginning of boot-up, during diagnostic checks.

Repeat this operation until you get the following screen.

3. The BIOS Setup screen appears:

ROM PCI/ISA BIOS CMOS SETUP UTILITY AWARD SOFTWARE, INC.			
SOYO COMBO SETUP STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING		
Esc : Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select Item F10 : Save & Exit Setup (Shift) F2 : Change Color Time, Date, Hard Disk Type			

Step 20. Quick BIOS Setup

This Motherboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS [SOYO COMBO SETUP]. The [SOYO COMBO SETUP] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

After the hardware installation is complete, turn the power switch on, then press the key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Follow these steps to configure the CPU settings.

1. Select [LOAD SETUP DEFAULT]

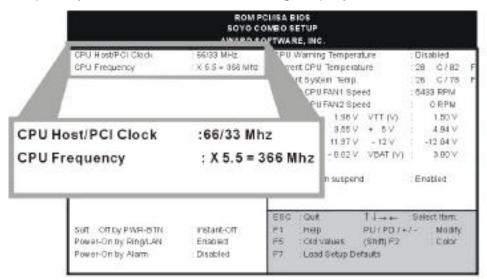
Select the "LOAD SETUP DEFAULT" menu and type "Y" at the prompt to load the BIOS optimal setup.

2. Select [STANDARD CMOS SETUP]

Set [Date/Time] and [Floppy drive type], then set [Hard Disk Type] to "Auto".

3. Select [SOYO COMBO SETUP]

Move the cursor to the [CPU Frequency] field to set the CPU frequency, as shown in the following display.



Available [CPU Frequency] settings on your SY-6IZA Motherboard are detailed in the following table. You are then required to fill in the next two consecutive fields: (1) the CPU Host/PCI Clock, and (2) the CPU Frequency.

CPU Frequency	Select the working frequency of your
300AMHz (66 x 4.5)	Celeron [™] processor among these preset
333MHz (66 x 5.0)	values.
366MHz (66 x 5.5)	Note: Mark the checkbox that
400MHz (66 x 6.0)	corresponds to the working frequency of
433MHz (66 x 6.5)	your Celeron [™] processor in case the CMOS configuration should be lost.
	- CiviOS configuration should be lost.



Note: if you use Bus Frequencies of 75 MHz, make sure that your PCI cards can cope with the higher PCI clock.

4. Select [SAVE & EXIT SETUP]

Press **<Enter>** to save the new configuration to the CMOS memory, and continue the boot sequence.

Troubleshooting at First Start

What should I do if the Motherboard refuses to start?

The 66MHz setting is used as default so whenever the BIOS settings are erased or reset, the board will be able to boot up. If the CPU frequency was set too high and the Motherboard refuses to start up, you can always load the default values by pressing the [Ins] key during boot up.

Step 21. Power Off

There are two possible ways to turn off the system:

- Use the **Shutdown** command in the **Start Menu** of Windows 95/98 to turn off your computer.
- Press the mechanical power-button and hold down for over 4 seconds, to shutdown the computer. If you press the power-button for less than 4 seconds, then your system will enter into Suspend Mode.

You are now ready to configure your system with the BIOS setup program. Go to *Chapter 3: BIOS SETUP*

Chapter 3

BIOS SETUP UTILITY

This Motherboard's BIOS setup program uses the ROM PCI/ISA BIOS program from Award Software Inc.

To enter the Award BIOS program's Main Menu:

- 1. Turn on or reboot the system.
- 2. After the diagnostic checks, press the [Del] key to enter the Award BIOS Setup Utility.

ROM PCI/ISA BIOS CMOS SETUP UTILITY AWARD SOFTWARE, INC.		
SOYO COMBO SETUP	INTEGRATED PERIPHERALS	
STANDARD CMOS SETUP	SUPERVISOR PASSWORD	
BIOS FEATURES SETUP	USER PASSWORD	
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION	
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP	
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING	
LOAD SETUP DEFAULTS		
Esc : Quit	$\uparrow \downarrow \rightarrow \leftarrow$: Select Item	
F10 : Save & Exit Setup	(Shift) F2 : Change Color	
Time, Date, Hard Disk Type		

Selecting items

- Use the arrow keys to move between items and select fields.
- From the Main Menu press arrow keys to enter the selected submenu.

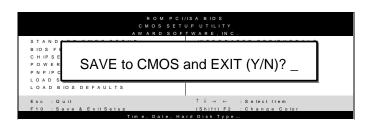
Modifying selected items

 Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly. **Hot Keys:** Function keys give you access to a group of commands throughout the BIOS utility.

Function	Command	Description
F1	Help	Gives the list of options available for each item.
Shift F2	Color	Change the color of the display window.
F5	Old values	Restore the old values. These are the values that the user started the current session with.
F7	Load Setup Defaults	Loads all options with the Power-On default values.
F10	Save & Exit Setup	Saves your changes and reboots the system.
[Esc]	Quit	Lets you return at anytime and from any location to the Main Menu.

SAVE AND EXIT SETUP

Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values.

EXIT WITHOUT SAVING

Selecting the [EXIT WITHOUT SAVING] option allows you to abandon all data and exit setup, therefore ignoring all your changes.



Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

3-1 SOYO COMBO SETUP

This Motherboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS [SOYO COMBO SETUP].

After the hardware installation is complete, turn the power switch on, then press the key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Then, select the [SOYO COMBO SETUP] option from the main menu and press the <Enter> key.

ROM PCI/ISA BIOS SOYO COMBO SETUP AWARD SOFTWARE, INC.					
CPU Host/PCI Clock	: 66/33 MHz	CPU Warning Temperature	: Disabled		
CPU Frequency	: X 5.5 = 366 Mhz	Current CPU Temperature	: 28 ½ C / 82 ½		
SDRAM RAS-to CAS Delay	: 2	Current System Temp.	: 26 ½ C / 78 ½		
SDRAM RAS Precharge Time	: 2	Current CPUFAN1 Speed	: 5433 RPM		
SDRAM CAS latency Time	: 2	Current CPUFAN2 Speed	: 0 RPM		
		Vcore (V) : 1.98 V VTT (V)	: 1.50 V		
Boot Sequence	: A,C,SCSI	3.3 (V) : 3.55 V + 5 V	: 4.94 V		
Quick Power On Self Test	: Disabled	+12 (V) : 11.97 V - 12 V	: -12.04 V		
		- 5 (V) : - 0.02 V VBAT (V)	: 3.00 V		
POWER ON Function	: BUTTON ONLY				
		CPUFAN off in suspend	: Enabled		
		ESC : Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select Item:		
Soft – Off by PWR-BTN	: Instant-Off	F1 : Help PU / PD / +	/ - : Modify		
Power-On by Ring/LAN	: Enabled	F5 : Old Values (Shift) F2	: Color		
Power-On by Alarm	: Disabled	F7 : Load Setup Defaults			

The [SOYO COMBO SETUP] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

3-1.1 Quick CPU Frequency Setup

Quick CPU Frequency Setup	Setting		Description
CPU Host/PCI Clock	66/33 MHz 75/37 MHz 83/41 MHz 100/33 MHz 103/34 MHz 112/37 MHz 124/41 MHz 133/44 MHz	140/35 MHz	Select the host clock of your Celeron™ processor from these values. Note: For the ZX chipset, a 66 MHz host clock frequency is acceptable. However, system stability is not guaranteed for other frequencies due to the limitations of this chipset.
CPU Frequency	multiplier for th 5.5,6]. The CP	e CPU. Options U frequency is t er], and should e	ost clock, choose the right s are: [2, 2.5, 3., 3.5, 4, 4.5, 5, then defined as [host clock equal the working frequency of

3-1.2 SDRAM Control Setting

SDRAM Control	Setting	Description	Note
SDRAM RAS-to- CAS Delay	2 3	Set to 2 for better system performance when the CPU FSB is 66MHz.	Default
SDRAM RAS Precharge Time	2 3	Set to 2 for better system performance when the CPU FSB is 66MHz.	Default
SDRAM Cache Latency Time	2 3	Set to 2 for better system performance when the CPU FSB is 66MHz.	Default

3-1.3 System Boot Control Settings

System Boot Control Settings	Setting	Description	Note
Boot Sequence	A, C, SCSI C, A, SCSI C, CD-ROM, A CD-ROM, C, A D, A, SCSI E, A, SCSI F, A, SCSI SCSI, A, C SCSI, C, A C only LS/ZIP, C	Choose the boot sequence adapted to your needs, for example: • [A, C, SCSI] means the BIOS will look for an operating system first in drive A, then in drive C, and eventually in SCSI device.	
Quick Power On	Disabled		
Self Test	Enabled	Provides a fast POTS at boot-up.	Default

3-1.4 Power Management

PM Events	Setting	Description	Note	
POWER ON	BUTTON-	Disables the Wake-Up by	Default	
Function	ONLY	Keyboard function.		
	KB Power	Enables you to wake-up the		
	ON	system by entering a password		
	Password	at the keyboard.		
	Hot Key	You can wake-up the system by pressing the key combination of your choice (Ctrl-F1~F12).		
If [POWER ON Function] is set to [KB Power ON Password]				
KB Power ON	Enter (your	Set the password that will wake-u	p your	
Password	password)	system.		

Power Management (Continued)

PM Events	Setting	Description	Note
Power button	Disabled	Set to disable the system can only wake up through the password (In case the password has been forgotten, use JP8 to clear the password, see page 22)	
	Enabled	Set to enable the system can wake up through the password and the power button.	Default
If [POWER ON	√ Function] i	is set to [Hot Key]	
HotKey	Ctrl- F1~F12	Choose the key combination that wake-up the system. [Ctrl-F1 to C	
Soft-Off by	Instant-off		Default
PWR-BTTN	Delay 4 Sec.	Turns off the system power 4 seconds after pushing the power button.	
Power-On by	Disabled		Default
Ring/LAN	Enabled	The system will self-power on me when the modem is ringing.	
Power-On by	Disabled	The system ignores the alarm.	Default
Alarm	Enabled	Set alarm to power on the system by the date (1-31) or time (hh:mm:ss). If the date is set to [0], the system will self-power on by alarm everyday at the set time.	

3-1.5 CPU Device Monitoring

CPU Device Monitoring	Setting	Description	Note
CPU Warning Temperature	Disabled Enabled	Set CPU temperature from 50°C to 70°C. The CPU will slow down when CPU temperature goes beyond the preset value. The CPU will continue to run slow until the temperature returns back within the safe	Default
Current CPU/System Temperature	°C/°F	Show the current status of CPU temperature.	
Current CPUFAN1/ CPUFAN2 Speed	RPM	Show the current status of CPU Fan	
Vcore, VTT, 3.3V, +12V, -5V, +5V, -12V,VBAT	V	Show the current voltage status.	
CPUFAN Off In Suspend	Disabled Enabled	Disables the PM timer. Switches off the CPU Fan when the system enters Suspend Mode.	Default

3-2 STANDARD CMOS SETUP

Select the [STANDARD CMOS SETUP] option from the Main Menu and press [Enter] key.

ROM PCI/ISA BIOS STANDARD CMOS SETUP AWARD SOFTWARE, INC.								
Date (mm:dd:yy)	: Thu, Jan 1	1998						
Time (hh:mm:ss)	: 1: 9 ::	25						
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	AUTO
Primary Slave	: Auto	0	0	0	0	0	0	AUTO
Secondary Master	: Auto	0	0	0	0	0	0	AUTO
Secondary Slave	: Auto	0	0	0	0	0	0	AUTO
Drive A : 1.44M	l, 3.5 in.							
Drive B : None					Base	e Memory	: 640K	
Floppy 3 Mode Sup	port : Disable	d			Extended	d Memory	: 31744K	
					Othe	r Memory	: 384K	
Video : E	GA/VGA							
Halt On : A	II, But Keyboa	ırd			Tota	l Memory	: 32768K	
ESC : Quit F1 : Help		↑↓ (Shift)		Select It		PU / PD /	+ / - : Modify	_

This screen allows you to modify the basic CMOS settings.

After you have completed the changes, press [Esc] key to return to the Main Menu.

3-2.1 Date & Time

	Display	Setting	Please Note
Date	mm/dd/yyyy	Type the current date	You can also the PUp/PDn keys to toggle
Time	hh:mm:ss		24-hour clock format 3:15 PM is displayed as 15:15:00

3-2.2 Hard Disks Type & Mode

Choose the type and mode for the hard disks that you have already installed.

Primary (Secondary) Master & Slave	Setting	Description	Note
Туре	Auto	BIOS detects hard disk type automatically.	Default
	User	User defines the type of hard disk.	
	None		
Mode	Auto	BIOS detects hard disk mode automatically.	Default
	Normal	Normal IDE hard disk	<528MB
	LBA	Enhanced IDE hard disk	>528MB
	Large	Large IDE hard disk (for certain hard disk)	



Note: If you have any questions on your hard disk type or mode, ask your hard disk provider or previous user for details.

3-2.3 Floppy Drives

Floppy Drives	Setting	Description	Note
		<u> </u>	
Drives A & B	360KB, 5.25 in.		
	1.2MB, 5.25 in.		
	720KB, 3.5 in.		
	1.44MB, 3.5 in.		Default
	2.88MB, 3.5 in.		
	None	Not installed	
Floppy 3-Mode	Disabled		Default
Support	Drive A Drive B Both	Supports 3-mode floppy diskette: 740KB/1.2MB/ 1.44MB on selected disk drive.	Special disk drive commonly used in Japan

3-2.4 Video

Select the video mode: EGA/VGA (Default), CGA 40, CGA 80, Mono (Monochrome).

3-2.5 Halt On

When the BIOS detects system errors, this function will stop the system. Select which type of error will cause the system halt: All Errors (Default), No Errors, All But Diskette, All But Keyboard, All But Disk/Key.

3-3 BIOS FEATURES SETUP

Select the [BIOS FEATURES SETUP] option from the Main Menu and press [Enter] key.

ROM PCI/ISA BIOS BIOS FEATURES SETUP AWARD SOFTWARE, INC.						
Virus Warning	: Disabled	Assign IRQ For VGA : Enabled				
CPU Internal Cache External Cache	: Enabled : Enabled	HDD S.M.A.R.T. capability : Disabled Video BIOS Shadow : Enabled				
Swap Floppy Drive Report No FDD For WIN 95	: Disabled : Yes	C8000-CBFFF Shadow : Disabled CC000-CFFF Shadow : Disabled D0000-D3FFF Shadow : Disabled				
Boot Up NumLock Status Security Option PCI/VGA Palette Snoop OS Select For DRAM > 64 MB	: On : Setup : Disabled : Non-OS2	D4000-D7FFF Shadow : Disabled D8000-D8FFF Shadow : Disabled DC000-DFFFF Shadow : Disabled				
Typematic Rate Setting Typematic Rate (Chars/Sec) Typematic Delay (Msec)	: Disabled : 6 : 250	ESC: Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select Item F1: Help PU/PD/+/-: Modify F5: Old Values (Shift) F2: Color F7: Load Setup Defaults				

After you have completed the changes, press [Esc] key and follow the instructions on your screen to save your settings or exit without saving.

3-3.1 Virus Warning

	Setting	Description	Note
Virus Warning	Disabled		Default
	Enabled	Enable this option to protect the boot sectors and partition tables of your hard disk. Any attempt to write to them will the system to halt and display a warning	
		message.	

3-3.2 Cache Memory Options

	Setting	Description	Note
CPU Internal Cache	Disabled		
	Enabled	Enables the CPU's internal cache.	Default
External Cache	Disabled		
	Enabled	Enables the external	Default
		memory.	

3-3.3 System Boot Control Settings

System Boot Control Settings	Setting	Description	Note
Swap Floppy	Disabled		Default
Drive	Enabled	Changes the sequence of A and B drives.	
Report No FDD For WIN 95	Yes	Windows will release IRQ line 6 (normally used by the Floppy Disk Drive) after you disable your on-board FDD and set this field to [Yes].	
	No	Windows will reserve INT 6 for your FDD, whether it is disabled or not.	
Boot Up NumLock	On	Puts numeric keypad in NumLock mode at boot-up.	Default
Status	Off	Puts numeric keypad in arrow key mode at boot-up.	

3-3.4 Security Option

Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. The following table describes the security settings.

	Setting	Description
Security Option	System	Each time the system is booted, the
		password prompt appears.
	Setup	If a password is set, the password
		prompt only appears when you attempt
		to enter the BIOS Setup program.

3-3.5 Other Control Options

Other Control Options	Setting	Description	Note
PCI/VGA Palette Snoop			Default
	The color of when using option to recolor.		
OS Select for DRAM>64MB	OS2	When using an OS2 operating system.	
	Non-OS2	When using another, non-OS2 operating system.	Default

3-3.6 Typematic Settings

Typematic Settings	Setting	Description	Note
Typematic	Disabled		Default
Rate Setting	Enabled	Enables to adjust the keystroke repeat rate.	

Typematic Settings (Continued)

Typematic Settings	Setting	Description	Note
0 2 3 1	-	nd [Typematic Delay] fields ting] is set to [Enabled]	are
Typematic Rate	6 (Char/sec) 8 (Char/sec) 10 (Char/sec) 12 (Char/sec) 15 (Char/sec) 20 (Char/sec) 24 (Char/sec) 30 (Char/sec)	Choose the rate at which a character is repeated when holding down a key.	Default
Typematic Delay	250 (msec) 500 (msec) 750 (msec) 1000 (msec)	Choose how long after you press a key down the character begins repeating.	Default

3-3.7 Other Control Options

Other Control Options	Setting	Description	Note
Assign IRQ	Disabled		
For VGA	Enabled	Use this default setting.	Default
HDD	Disabled		
S.M.A.R.T. capability	Enabled	Enable this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details.	
Video or	Disabled		
Adapter BIOS Shadow	it is enable These 16 s from ROM BIOS code	is shadowed in a 16K segment if d and if it has BIOS present. segments can be shadowed to RAM. BIOS shadow copies from slower ROM to faster S can then execute from RAM.	Default

3-4 CHIPSET FEATURES SETUP



Caution: Change these settings only if you are already familiar with the Chipset.

ROM PCI/ISA BIOS CMOS SETUP UTILITY CHIPSET FEATURES SETUP						
Auto Configuration	: Enabled	Passive Release	: Enalbed			
EDO RAM RAS-to CAS Delay	: 60n/s	Delayed Transaction	: Disabled			
EDO CASx# MA Wate state	: 2					
	: 2	AGP Aperture Size	: 64			
SDRAM Precharge Control	: Disabled					
		Spread Spectrum	: Disabled			
	: Disabled					
	: Disabled					
Video RAM Cacheable	: Disabled					
8 Bit I/O Recovery Time 16 Bit I/O Recovery Time	: 1 : 1					
Memory Hole At 15M –16M	: Disabled	•	PU/PD/+/- : Modify (Shift) F2 : Color			

The [CHIPSET FEATURES SETUP] option changes the values of the chipset registers. These registers control the system options in the computer.

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

The following table describes each field in the CHIPSET FEATURES SETUP Menu and how to configure each parameter.

3-4.1 CHIPSET FEATURES SETUP

CHIPSET FEATURES	Setting	Description	Note
Auto	Disabled		
Configuration	Enabled	It is strongly recommended to enable this option so that the system automatically sets all chipset feature options on the left panel of the screen (except for cache update & BIOS cacheable).	Default
EDO RAM RAS-to CAS Delay	60ns 50ns	Choose the DRAM speed that will produce the appropriate DRAM timing for your system.	Default
EDO CASx# MA Wate state	2 1	Use the default setting	Default
EDO RASx# Wate state	2 1	Use the default setting	Default
SDRAM Precharge Control	Disabled Enabled	Use the default setting	Default
System BIOS	Disabled		
Cacheable	Enabled	The ROM area F0000H-FFFFH is cacheable.	Default
Video BIOS	Disabled		
Cacheable	Enabled	The video BIOS C0000H-C7FFFH is cacheable.	Default
Video RAM	Disabled		Default
Cacheable	Enabled	The ROM area A0000-BFFFF is cacheable.	
8 BIT I/O Recovery Time	1	Use the default setting	Default

CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
16 BIT I/O Recovery Time	1	Use the default setting	Default
Memory Hole At 15M-16M	Disabled Enabled	Some interface cards will map their ROM address to this area. If this occurs, select [Enabled] in this field.	Default
Passive Release	Enabled	Use the default setting	Default
Delayed Transaction	Enabled	Use the default setting	Default
AGP Aperture Size	64 4-256MB	AGP could use the DRAM as its video RAM. Choose the DRAM size that you wish to allocate as video RAM.	Default
Spread Spectrum Modulated	Disabled Enabled	When using Spread Spectrum Modulated 1.5% or 6% for FCC or DOC testing.	Default

3-5 POWER MANAGEMENT SETUP

The [POWER MANAGEMENT SETUP] sets the system's power saving functions.

daving randudities						
ROM PCI/ISA BIOS POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.						
ACPI function PM Control by APM Video Off Method Video Off After	: Enabled : Yes : V/H SYNC+Blank : Standby	** Reload Global Tir IRQ [3-7, 9-15], NMI Primary IDE 0	: Disabled : Disabled			
MODEM Use IRQ Power Management Doze Mode Standby Mode Suspend Mode HDD Power Down PCI/VGA Act-Monitor	: 3 : User Define : Disable : Disable : Disable : Disable : Disabled	Primary IDE1 Secondary IDE 0 Secondary IDE1 Floppy Disk Serial Port Parallel Port	: Disabled : Disabled : Disabled : Disabled : Disabled : Enabled : Disabled			
IRQ 8 Break Suspend	: Disabled	ESC : Quit F1 : Help F5 : Old Values F7 : Load Setup	$\uparrow \downarrow \rightarrow \leftarrow$: Select Item PU/PD/+/- : Modify (Shift) F2 : Color Defaults			

After you have completed the Power Management Setup, press [Esc] to return to the Main Menu.

3-5.1 Power Management Controls

Power Management Controls	Setting	Description	Note
ACPI	Disabled		Default
function	Enabled	ACPI (Advanced Configuration Power Management Interface)	
PM Control by APM	Yes	To use Advanced Power Management (APM) you must run [power.exe] under DOS V6.0 or later version.	Default
	No		
Video Off Method	V/H Sync+Blank Blank screen DPMS Supported	Selects the method by which the monitor is blanked.	Default
Video Off After	Standby Suspend Doze	Choose the PM mode you want video to go off after the mode is being active.	
MODEM Use IRQ	3 3-11, NA	Assigns an IRQ# to the modem device.	Default

3-5.2 PM Timers

3-5.2 PM Tim PM Timers	Setting		Descrip	tion			Note
Power	User Defi	ine Lets you define the HDD a system power down times.				Default	
Management	Disable			the Gree			_
	Disable		Features		511 I (J	
			Doze	Standby	Susp		HDD
	Min Covin		timer	timer	timer		power down
	Min Savin Max Savii		1 Hour 1 Min	1 Hour 1 Min	1 Ho		15 Min 1 Min
The following [Management]				e configu	ired (only if	[Power
Doze Mode	Disable					Defau	ılt
	1Min-	Whe	en the set	t time has	;	Syste	m clock
	1Hour			S sends		drops	
			imand to er Doze M	the syste	m to	33MF	lz.
		ente	er Doze iv	ioae.			
The following [Management]	is set to [L		='	y be conf	igure		
Standby	Disable					Defau	ılt
Mode	1Min-			t time has			
	1Hour	-		S sends a the syste			
			r Standb	_	111 10		
				,			
The following [[Power Manag					ifigur	ed onl	y if
Suspend	Disable					Defau	ılt
Mode	1Min-		•	node, the		Only a	
	1Hour		•	ompletely	•	CNAIN C	ced (or
		instr	uctions a	ire execu	ted.)		CPU can his mode.
HDD Power	Disabled					Defau	ılt
Down	1-15Min	Whe	en the set	t time has	;	Some	
				S sends			HDDs
				the HDD			ot support Ivanced
		•		This turn	s off	function	
		trie	HDD mot	UI.			

3-5.3 PM Events

PM Events	Setting	Description	Note
VGA Active	Disabled		D ()
Monitor	Enabled	Enables the power management timers when a [no activity] event is detected.	Default
IRQ 8 Break	Disabled		Default
Suspend	Enabled	Alarm function is active.	

3-5.4 Reload Global Timer Events

Power Down & Resume Events	Setting	Description	Note
IRQ [3-7,9-	Disabled		
15], NMI	Enabled	The system monitors these elements for activity. The system will resume if [IRQ activity] is detected.	Default
IDE0, IDE1	Disabled		Default
➤ Primary ➤ Secondary	Enabled	Enables the PM timers when [No Activity Event] is detected.	Doraun
Floppy Disk	Disabled		Default
Serial Port Parallel Port	Enabled	Enables the PM timers when [No Activity Event] is detected.	

3-6 PNP/PCI CONFIGURATION SETUP

This option sets the Motherboard's PCI Slots.

	ROM PCI/ISA BIOS						
	PNP/PCI CONFIGURATION						
		AWARD SOF	TWARE, INC.				
Resources	Controlled By	: Manual	Slot 1/AGP Use IRQ No. : Auto				
Reset Cor	figuration Data	: Disabled	Slot 2 Use IRQ No. : Auto				
			Slot 3 Use IRQ No. : Auto				
IRQ - 3	assigned to	: Legacy ISA	Slot 4/USB Use IRQ No. : Auto				
IRQ - 4	assigned to	: Legacy ISA					
IRQ - 5	assigned to	: PCI/ISA PnP	Used MEM base addr : N/A				
IRQ - 7	assigned to	: PCI/ISA PnP					
IRQ - 9	assigned to	: PCI/ISA PnP					
IRQ - 10	assigned to	: PCI/ISA PnP	Assign IRQ For USB : Enabled				
IRQ - 11	assigned to	: PCI/ISA PnP					
IRQ –12	assigned to	: PCI/ISA PnP	PNP OS Installed : No				
IRQ - 14	assigned to	: PCI/ISA PnP					
IRQ - 15	assigned to	: PCI/ISA PnP					
DMA - 0	assigned to	: PCI/ISA PnP					
DMA - 1	assigned to	: PCI/ISA PnP	ESC : Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select Item				
DMA - 3	assigned to	: PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify				
DMA - 5	assigned to	: PCI/ISA PnP	F5 : Old Values (Shift) F2 : Color				
DMA - 6	assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults				
DMA - 7	assigned to	: PCI/ISA PnP					



Note: Starred (*) items will disappear when the [Resources Controlled By] option is set to [Auto].

After you have completed the PCI Slot Configuration, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

3-6.1 PNP/PCI Configuration Controls

PNP/PCI Controls	Setting	Description	Note
Resources Controlled By	Manual	BIOS does not manage PO PnP card IRQ assignment.	
	Requires	to assign IRQ-# and DMA-#	# to PCI
	•	P manually.	
		<i>y</i>	
		,7,9,10,11,12,14,15 assigned	ea to: _
	DMA-0,1,	3,5,6,7 assigned to: _	
	Auto	The Plug-and-Play BIOS auto manages PCI/ISA PnP card IRQ assignment automatically.	Recommended
Reset Configuration	Disabled	Retain PnP configuration data in BIOS.	Default
Data	Enabled	Reset PnP configuration data in BIOS.	

3-6.2 PNP/PCI Configuration Setup

PNP/PCI Setup	Setting	Description	Note
If [Resources C	ontrolled By] i	s set to [Manual]	
IRQ-# and DMA-# assigned to:	PCI/ISA PnP	Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card.	IRQ-3,4,5,7,9,10, 11,12,14,15 DMA-0,1,3,5,6,7
	Legacy ISA	Choose IRQ-# and DMA-# assigned to Legacy ISA card.	IRQ-3,4,5,7,9,10, 11,12,14,15 DMA-0,1,3,5,6,7

Under this item the user can assign an IRQ to a PCI slot. However, there under some conditions the IRQ will not be assigned as selected under this item:

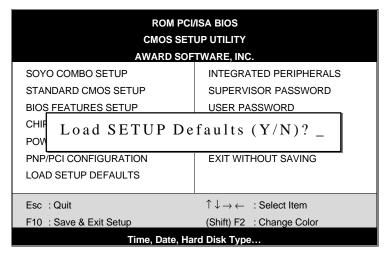
- 1. IRQs 0, 1, 2, 6, 8, 13 can NOT be assigned, because they are fixed.
- 2. IRQs 5, 9, 10, 11 are available
- 3. IRQs 3,4,7,12,14 and 15 will only be assigned if they are free. See the table below on how to free them:

PNP/PCI Configuration Setup (Continued)

PNP/PCI		Setting	Description		Note		
Setup		Cotting	D 00		11010		
Interrupt	How to s	set the BIOS	S to r	release the IRQ to the PnP Interrupt pool:			
Line	PnP / P0	CI configura	tion	Integrated Peripherals	3		
IRQ 15	IRQ 15:	PCI / ISA	PnP	On-Chip Secondary P	CI IDE: disabled		
IRQ 14	IRQ 14:	PCI / ISA	PnP	On-Chip Primary PCI	IDE: disabled		
				Interrupt 12 will be rele			
IRQ 12	IRQ 12:	PCI / ISA	PnP	BIOS automatically if	the PS/2 Mouse		
				Port is not used.			
IRQ 7	IRQ 7:	PCI / ISA	PnP	Onboard parallel port:	disabled		
IRQ 4	IRQ 4:	PCI / ISA	PnP	Onboard Serial port 1:	disabled		
IRQ 3	IRQ 3:			Onboard Serial port 2:			
		reassign an	other	interrupt to a PCI slot	after BIOS passes		
			lly if	you use Windows 95, 9			
Slot 1/2		Auto			Default		
Use IR	Q NO.						
Based	MEM	Memory	8K,16K,32K,64K.		This item		
Length		length	(Please ask your card		appears only		
			•	rider for the exactly	when the		
			men	nory length of this	[Based MEM		
			add.	on card.)	base addr] set		
					to I/O address.		
Assign	IRQ	Enabled	BIO	S will assign IRQ for	Default		
For US				B port.			
		Disabled		S won't assign IRQ			
			for l	JSB port.			
		Vaa	0-1	thin field to DV1'f			
PnP OS Installed		Yes		this field to [Yes] if			
				are running dows 95, which is			
				compatible.			
		No		e OS you are	Default		
				ning does not	(If there is any		
				oort PnP	doubt, set this		
				figuration.	field to [No])		

3-7 LOAD SETUP DEFAULTS

Select the [LOAD SETUP DEFAULTS] option from the Main Menu to load the system values you have previously saved. This option is recommended if you need to reset the system setup and to retrieve the old values.



Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.



Warning: If you run into any problem after changing the BIOS configuration, please load the SETUP DEFAULTS for stable performance.

3-8 INTEGRATED PERIPHERALS



Caution: Change these settings only if you are already familiar with the Chipset.

The [INTEGRATED PERIPHERALS] option changes the values of the chipset registers. These registers control the system options in the computer.

The following screen shows setup default settings.

The following selection							
	ROM PC	I/ISA BIOS					
INTEGRATED PWEIPHERALS							
AWARD SOFTWARD, INC.							
IDE HDD Block Mode	: Enabled	Onboard Serial Port 1	: 3F8/IRQ4				
IDE Primary Master PIO	: Auto	Onboard Serial Port 2	: 2F8/IRQ3				
IDE Primary Slave PIO	: Auto	UART Mode Select	: Normal				
IDE Secondary Master PIO	: Auto						
IDE Secondary Slave PIO	: Auto						
IDE Primary Master UDMA	: Auto	Onboard Parallel Port	: 378/IRQ7				
IDE Primary Slave UDMA	: Auto	Parallel Port Mode	: SPP				
IDE Secondary Master UNMA	: Auto						
IDE Secondary Slave UDMA	: Auto						
On-Chip Primary PCI IDE	: Enabled	PWRON After PWR-Fail	: Off				
On-Chip Secondary PCI IDE	: Enabled						
USB Keyboard Support	: Disabled						
Init Display First	: PCI Slot						
			← : Select Item				
Onboard FDC Controller	: Enabled	•	-/- : Modify				
			F2 : Color				
		F7 : Load Setup Defaults					

The following tables describe each field in the INTEGRATED PERIPHERALS Menu and provide instructions on how to configure the IDE controls, FDC controls, and the onboard serial and parallel ports.

3-8.1 IDE Device Controls

IDE Controls	Setting	Description	Note
IDE HDD Block Mode	Disabled		
	Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default
IDE > Primary Master PIO	mode 0-4	0 is the slowest speed 4 is the fastest speed	
 Primary Slave PIO Secondary Master PIO Secondary Slave PIO 	Auto	For better performance and stability, we suggest you use the Auto setting to set the HDD control timing.	Default
IDE	Disabled		
➤ Primary Master UDMA ➤ Primary Slave UDMA ➤ Secondary Master UDMA ➤ Secondary Slave UDMA	Auto	Select Auto to enable Ultra DMA Mode support.	Default
On-Chip PCI IDE > Primary	Disabled	Turn off the on-board IDE	
> Secondary	Enabled	Use the on-board IDE	Default

3-8.2 Keyboard Controls

Keyboard Controls	Setting	Description	Note
USB Keyboard Support	Disabled	Turn off the on-board	Default
, , , ,		IDE	
	Enabled	Use a USB keyboard	

3-8.3 Init Display Controls

Init Display Controls	Setting	Description	Note
Init Display First	PCI Slot AGP	Choose which card – AGP Display card or PCI VGA card – to initialize first.	Default

3-8.4 FDC Controls

FDC Controls	Setting	Description	Note
Onboard FDC controller	Disabled	Turn off the on-board floppy controller	
	Enabled	Use the on-board floppy controller	Default

3-8.5 Onboard Serial Ports

Onboard Serial Ports	Setting	Description	Note
Onboard	Disabled		
Serial Port 1 / Serial Port 2	3F8/IRQ4	Choose serial port 1 & 2's I/O address.	Default (port 1)
	2F8/IRQ3	Do not set port 1 & 2 to the same address	Default (port 2)
	3E8/IRQ4	except for Disabled or	
	2E8/IRQ3	Auto.	
	Auto		
UART Mode Select		The second serial port	Default
	IrDA	offers these InfraRed interface modes.	
	ASKIR		
If [UART Mode Select	ct] is set to [IrD/	A]/[ASKIR]	
•	Hi, Hi, Lo, Lo, Lo, Hi, Hi, Lo	This item allows you to determine the active of RxD, TxD.	

3-8.6 Onboard Parallel Ports

Onboard Parallel Ports	Setting	Description	Note
Onboard Parallel Port	378H/IRQ7 3BCH/IRQ7	Choose the printer I/O	Default
Tort	278H/IRQ5	addiess.	

Onboard Parallel Ports (Continued)

Onboard Parallel Ports	Setting	Description	Note
FULS			
Parallel Port Mode	ECP/EPP SPP ECP EPP/SPP	The mode depends on your external device that connects to this port.	Default
If [Parallel Port Mode]	is set to [EC	P1 mode	
ECP Mode use	3	Choose DMA3	Default
DMA	1	Choose DMA1	
If [Parallel Port Mode]	is set to [FPI	P1 mode	
EPP Mode Select		Select EPP port type 1.9	
	EPP 1.7		Default
PWRON After PWR-Fail	On	The system will switch on when power comes back after a power failure.	
	Off	The system will remain off when power comes back after a power failure.	Default
	Former-	The system will return to	
	sts	the state it was in before the power failure when power returns. (i.e: If the system was on, it will switch on again, if it was off, it will remain off)	

3-8.7 MULTI I/O ADDRESSES

Default settings for multi-I/O addresses are as follows:

Port	I/O Address	IRQ	Status
LPT1	378H	7	ECP/EPP
COM1	3F8H	4	
COM2	2F8H	3	



Warning: If a default I/O address conflicts with other I/O cards such as sound card, you must change one of the I/O addresses to remedy to this address conflict. (I/O addresses can be adjusted from the BIOS Setup Utility)

3-9 SUPERVISOR PASSWORD

Based on the setting you have made in the [Security Option] of the [BIOS FEATURES SETUP] section, the password prevents access to the system or the setup program by unauthorized users. Follow this procedure to set a new password or disable the password:

- Choose [BIOS FEATURES SETUP] in the Main Menu and press [Enter]. Select the [Security Options] item and set the field to:
 - a. [System]: The password is required every time the system is booted. This means only a person who knows the password can use this computer.
 - b. [Setup]: The password is required only when you attempt to enter the BIOS Setup program.

Choose [SUPERVISOR PASSWORD] from the Main Menu and press [Enter]. The following prompt appear:

Enter Password:



Warning: If you forget or lose the password, the only way to access the system is to set jumper JP5 to clear the CMOS RAM. All setup information is lost and you must run the BIOS setup program again.



Note: If you do not wish to use the password function, press [Enter] directly and the following message appears:

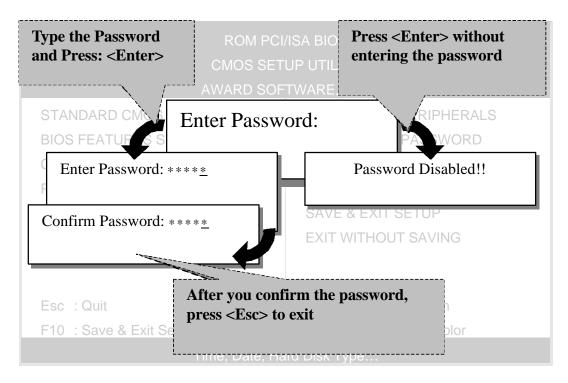
Password Disabled!!

3. Enter your new password and press [Enter]. The following message appears, prompting to confirm the new password:

Confirm Password:

4. Re-enter your password and then press [Enter] to exit to the Main Menu.

This diagram outlines the password selection procedure:



3-10 USER PASSWORD

When the user password option is on, you are not allowed to change any setting in the [CMOS SETUP UTILITY] except for changing the user's password.

The password setting procedure is similar to that for the [SUPERVISOR PASSWORD] (Refer to section 3-9).

3-11 IDE HDD AUTO DETECTION

This Main Menu function automatically detects the hard disk type and configures the STANDARD CMOS SETUP accordingly.

ROM PCI/ISA BIOS CMOS SETUP UTILITY AWARD SOFTWARE, INC.									
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE									
Primary Master	:								
	Selec	t Primar	y Master	Option (N:	=Skip) :	N			
OPT	ONS SIZE	CYLS	HEAD	PRECOMF	LANDZ	SECTOR	MODE		
2(Y)	1707	827	64		0 3308	63	LBA	-	
1	1707	3309	16	6553	5 3308	63	NORMAL		
3	3 1707 827 64 65535 3308 63 LARGE								
Note: Some Ose	Note: Some Oses(SCO-UNIX Before v5.0) must use "NORMAL" for installation								



Note: This function is only valid for IDE type of hard disk drives.

Chapter 4

3D PnP AUDIO ONBOARD

4-1 ONBOARD JOYSTICK PORT

A joystick, in computer graphics, is a lever with at least two degrees of freedom used as an input device. The joystick is normally used as a locator in at least a 2-D plane.

The joystick device is most widely used in video games applications. Attach the joystick cable to the 15-pin JOYSTICK port at the rear panel of your Motherboard.

4-2 ONBOARD AUDIO

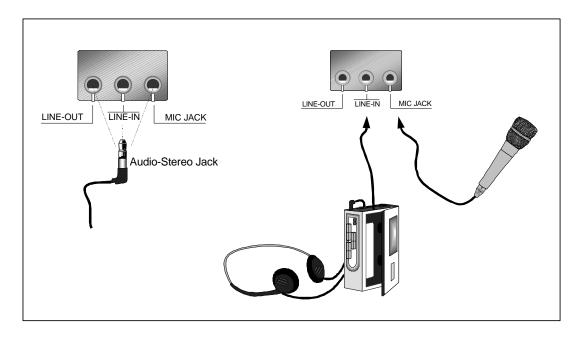
This Motherboard features three built-in audio-stereo ports (labeled line-in, line-out, and mic jack) convenient to directly plug-in all your external audio devices. Your SY-6IZA Motherboard is making use of the CREATIVE ™ES1373 sound chipset technology and applications programs.

Note: Please refer to *Chapter 5 and Chapter 6-* Onboard Sound Driver Installation for a detailed procedure on how to install the audio driver depending on the particular environment (Win NT 3.5/4.0, Win 95/98) installed on your system.

4-2.1 Connecting your Audio Devices

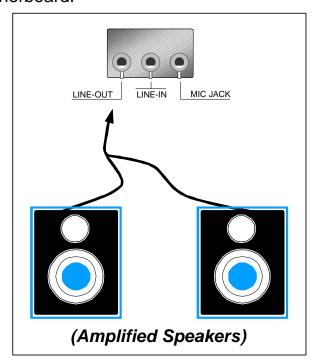
You can connect audio devices to the following ports:

- headphones or pre-amplified speakers to the "line-out" port;
- a line-in device such as CD/Cassette player to the "line-in" port;
- a microphone to the "mic" port.



4-2.2 Connecting Speakers

You can connect external speakers to the "Line-out" port on your SY-6IZA Motherboard.





Note: This Motherboard requires a speaker with **built-in amplifier** (Amplified Speaker) to generate proper output sound volume.

Chapter 5

DRIVERS INSTALLATION

Your SY-6IZA Motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains the user's manual file for your new Motherboard, the drivers software available for installation, and a database in HTML format with information on SOYO Motherboards and other products.

The SOYO CD Start Up Program automatically detects which SOYO Motherboard you own and displays the corresponding model name.

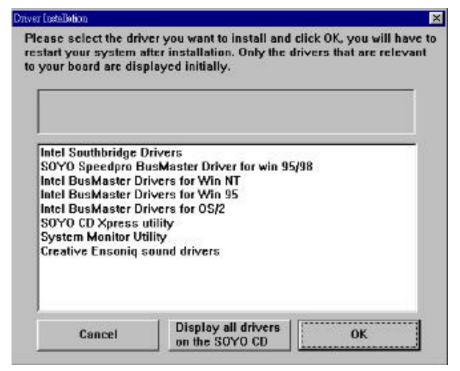
Step 1. Insert the SOYO CD into the CD-ROM drive The SOYO CD will auto-run, and the SOYO CD Start Up Menu will display as shown below.



Step 2. Install Drivers and Utilities

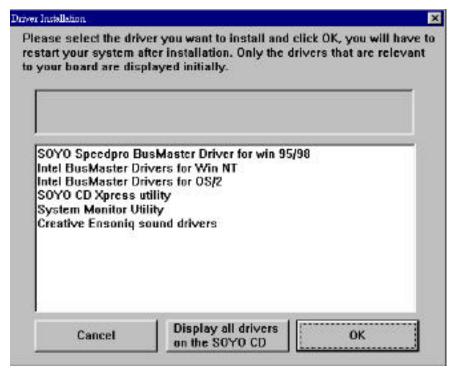
Click the Install Drivers button to display the list of drivers software that can be installed with your Motherboard. The Start Up program displays the drivers available for the particular model of Motherboard you own. We recommend that you only install those drivers.

The following drivers are available for Windows 95



(Driver Installation Menu)

The following drivers are available for Windows 98



(Driver Installation Menu)

A short description of all available drivers follows:

Intel Southbridge Drivers

Because Windows 95 does not recognize the Southbridge of the newer Intel chipsets (TX, BX, ZX etc) this utility has to be run, it will update the necessary Windows files. (Only for Windows 95)

- SOYO SpeedPro Busmaster Driver for Win 95/98
 Without the busmaster drivers the CPU will need to be involved every time data is read from or written to the Harddisk. The busmaster drivers make use of DMA (Direct Memory Access) to relieve the CPU of this burden, thus speeding up the system.

 The SOYO SpeedPro driver makes use of an advanced caching algorithm, which gives it an advantage over other busmaster drivers.
- Intel Busmaster Drivers for Windows 95
- Intel Busmaster Drivers for Win NT
- Intel Busmaster Drivers for OS/2

These are the official busmaster drivers as supplied by Intel.



Note: Do NEVER install two types of busmaster drivers on your system, this will lead to conflicts and system instability. Therefore, if you install the SOYO SpeedPro Busmaster driver you can NOT install the Intel Busmaster drivers. Before installing a new busmaster driver first UNINSTALL the old busmaster driver.

SOYO CD Xpress Utility

This utility will enhance your CD-ROM Drive data-thoughput by using space on the Harddisk as cache. This way application programs can access data faster. This utility is suitable for Windows 95/98.

System Monitor Utility

Your Motherboard comes with a hardware monitoring IC. By installing this utility Temperature, Fan speed and Voltages can be monitored. It is also possible to set alarms when current system values exceed or fall below pre-set values.

Creative Ensoniq Sound Drivers

These drivers have to be installed if the user wants to make use of the on-board Creative Soundchip.

Select which driver you want to install and click **OK**, or click **Cancel** to abort the driver installation and return to the main menu.

Note: Once you have selected a driver, the system will automatically exit the SOYO CD to begin the driver installation program. When the installation is complete, most drivers require to restart your system before they can become active.

However, to display the list of all drivers software available with SOYO Motherboards, click the *Display all drivers on the SOYO CD* button. Please make sure to install only the drivers adapted to your system, or otherwise this cause system malfunctions.

Step 3. Enter the SOYO CD

Click the *Enter SOYO CD* button to enter the SOYO HTML database. The Start Up program will activate the default HTML browser installed on your system (for example, Internet Explorer or Netscape) to visualize the contents of the SOYO CD.

The SOYO CD contains useful information about your Motherboard and other SOYO products available in as many as eleven different languages. For your convenience, this information is available in HTML format, similar to the format widely used on the Internet.



(SOYO CD HTML Database in English*)

(* The list of menu options may vary between languages)

Note: If no HTML browser is installed on your system, the Start Up program will prompt you on whether or not you would like to install the Internet Explorer* browser. Click YES to install the HTML browser. After the installation is complete, please restart your system. Then re-run the SOYO CD and you will be able to browse the SOYO HTML database.

(* Internet Explorer is a Microsoft Trademark)

SY-6IZA

Step 4. Select which driver you want to install and click *OK*

Notice 1: You may click **Cancel** to abort the driver installation and return to the main menu.

Notice 2: Once you have selected a driver, the system will automatically exit the SOYO CD to begin the driver installation program. When the installation is complete, most drivers require you to restart your system before they can become active.

Chapter 6

ONBOARD SOUND DRIVER INSTALLATION

Installing AudioPCI in Windows 95/98

To install the audio drivers in Windows 95/98, insert the SOYO CD into your CD-ROM drive. It will auto-run (If not, run Cdstart.exe in the root of the CD). Now press **the install the 6IZA drivers button**, select 'Creative Ensoniq Sound drivers' and press 'OK'. The driver installation program will be run, follow the instructions on the screen.

Testing the Installation in Windows 95/98

After the drivers are installed, you can use Windows 95/98 Media Player to test whether your audio card is working properly.

- Click the [Start] button, point to Programs, point to Accessories, point to Multimedia. (for Windows 98. choose Entertainment) and then click Media Player.
- 2. On the Device menu, click [Sound].
- 3. In the Open dialog box, select a sound file form the list, and then click the [Open] button.
- On the Media Player, click the [Play] option. You should hear the selected sound being played. If you encounter any problems, consult the Troubleshooting section of the online User's Guide.

Note: If you do not have Media Player, install it by following these instruction:

- Click the [Start] button, Point to Settings, and then click [Control Panel].
- 2. In the Control Panel window, double-click the Add/Remove Program icon
- 3. Click the Windows Setup tab.

- 4. Select the Multimedia check box, and then click the [Details] button.
- 5. In the Multimedia dialog box, select the Media Player check box, and then click the [OK] button.
- 6. Follow the instructions on the screen to complete the installation.

Uninstalling Software in Windows 95/98

- 1. Click the [Start] men, point to Settings and click [Control Panel].
- 2. Double-click the Add/Remove Programs icon.
- 3. On the Install/Uninstall tabbed page, select Sound Blaster AudioPCI 64V.
- 4. Click the Add/Remove button, and then click the [Yes] button when prompted to remove the software.

Installing AudioPCI in Windows NT4.0

This section shows you how to properly install the audio drivers under Windows NT 4.0. It contains the following sections:

- Installing Software in Windows NT 4.0.
- Testing the Installation in Windows NT 4.0
- Uninstalling AudioPCI in Windows NT 4.0
- Reinstalling the Audio Drivers From the Installation Disc

Installing Software in Windows NT 4.0

To install the software:

The software installation in NT 4.0o includes the installation of audio drivers.

- Insert the installation CD into your CD-ROM drive. The AutoPlay screen appears,
- 2. Follow the instructions on the screen to complete the installation.

Testing the Installation in Windows NT 4.0

You may run a simple application to test the card s MIDI and wave sound playback. This ensure that the cared is properly installed and that there are no conflicts in the IRQ. DMA, or I/O settings.

To test the installation:

- In the Start menu, point to Programs, point to Programs. point to Accessories, point to Multimedia, and then click [Media Player].
- 2. On the File menu, click [Option].
- Browse to any folder that contains a file with the extension wav.
 Select the file and click the [Open] button. Click the [Play] button to play the file.

Uninstalling AudioPCI in Windows NT 4.0-

To uninstall the software:

- 1. Click the [Start] button, point to Settings and click [Control Panel]. Double-click the Multimedia icon.
- 2. From the Audio Devices tabbed page, Select any existing audio devices and then click Remove. Click [Yes] when prompted to remove the driver.
- 3. Close the Multimedia Properties windows and restart your computer.

Reinstalling the Audio Drivers From the Installation Disc You may want to reinstall the audio drivers if you think they are corrupted. To do so:

- 1. Insert the installation CD into you CD-ROM drive.
- Run the UPDPCINT.EXE program from the D:\AUDIO\Language\NT4DRV folder, where D: represents your CD-ROM drive and Language represents the language of the software that you want to install.

A brief message appears. Then the pointer returns to its normal shape, indicating that the update is complete.